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## Precision Electric Turret (PET) for Multi Purpose Applications

#### Abstract

Experience and design knowledge gained in systems integration and turret performance improvements on the Apache AH-64 programs have provided the technology basis for successful applications of Boeing's Remote Advanced Weapon System (RAWS). The Precision Electric Turret contributes key technology for insertion in a modular approach to a high performance, medium caliber gun system suitable for light airborne, naval and ground platforms.

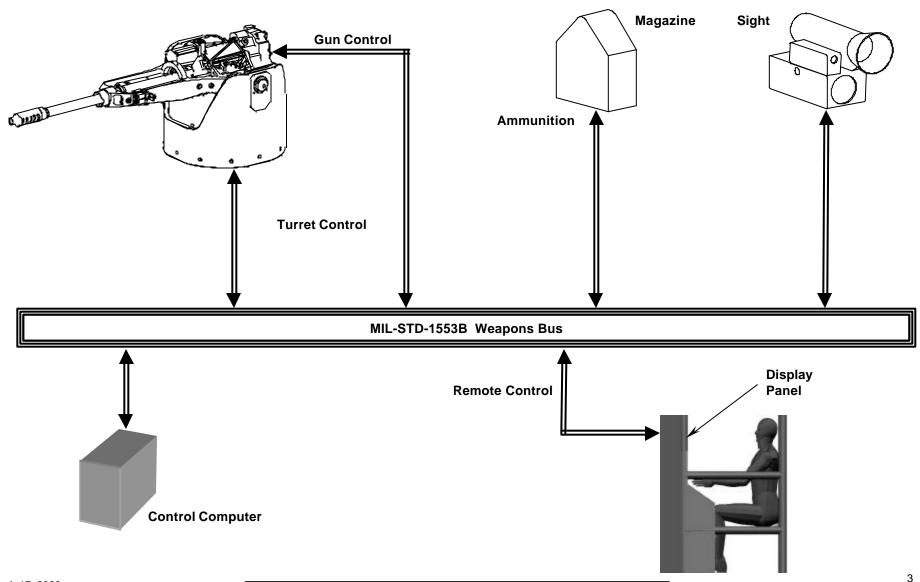


# REMOTE ADVANCED WEAPONS SYSTEM (RAWS) PERFORMANCE FEATURES

- High-Performance Weapon System
  - Highly Effective Ammunition and Weapon
  - Light-Weight; Remotely Controlled Turreted System
  - Fast Response Suited for Manual or Computer Fire Control
  - Features Digital Control; Inertial Stabilization, and Precise Fault Isolation and Built-In Test.
  - Low Cost Modular Components; Fast Installation or Removal
  - Interchangeable Between Many Light Platforms
  - Minimal Intrusion Into Mounting Platform



### **MODULAR SCHEMATIC**





#### **WEAPON & AMMUNITION**

- Based on Proven Apache Weapon System
  - The M230 Chain Gun<sup>a</sup> Weapon; Extremely Lethal, Reliable, and Combat Proven. Existing In US Army Inventory
  - Compatible with Fielded Ammunition (30mm M788 TP, M789 HEDP, ADEN, and DEFA Families)





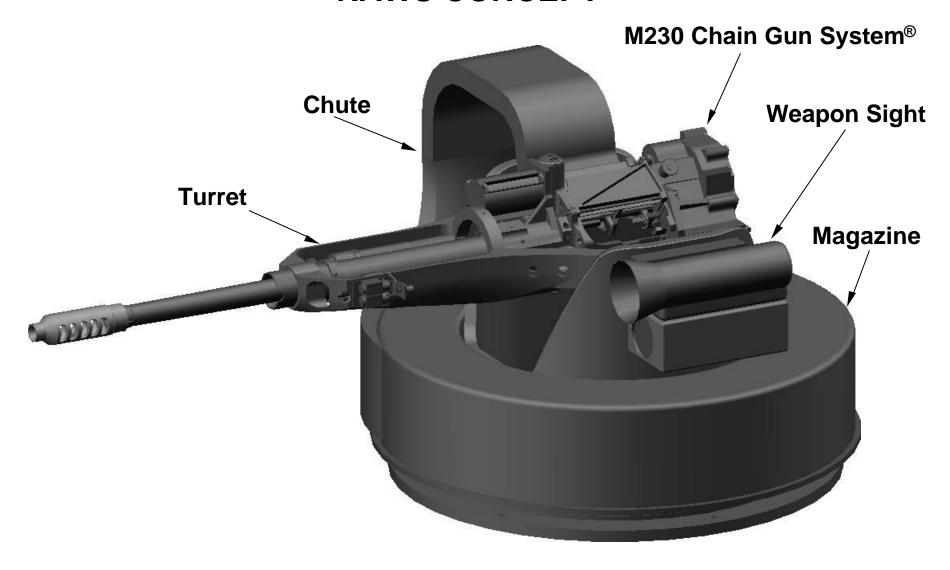


### PRECISION ELECTRIC TURRET (PET)

- Turret Component Description
  - The Turret Body is an Light-Weight Advanced Composite
  - Turret Mount, Drive Body and Gun Cradle are High strength
     Aluminum Providing a Light, Stable Interface with the
     Weapon
  - The Turreted Weapon is Inertial Stabilized by Robust Ring-Laser Fiber Optic Gyroscopes
  - The Turret Digital Controller Is Based on an Existing Motor Drive Unit That Was Developed Specifically for Turret Control
  - The Turret Drives use the latest Anti-Backlash Technology



### **RAWS CONCEPT**





#### **AMUNITION HANDLING**

Ammunition Magazine Concepts Chute

- Already Designed And Tested
- Easy Access & Loading
- 180 Rounds
- Low Profile
- Approximately 200 Rounds Chute
- Distributes Ammunition Load



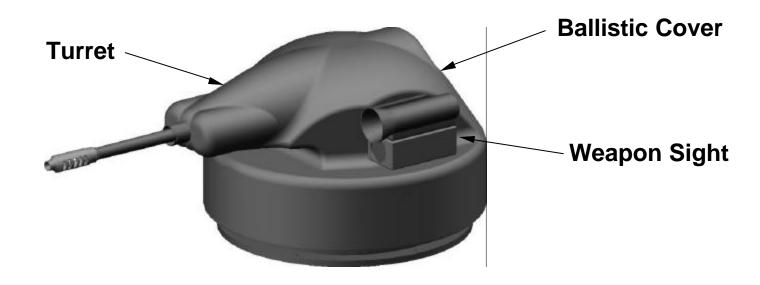


Magazine



### **DAMAGE TOLERANT**

- Ballistic Protection
  - Flexible Kevlar, Light Weight and
  - Encompasses Vital Parts
  - Quick & Easy Removal Or Installation For Turret
     Maintenance Or Ammunition Reloading
  - Provides Level IV Protection (7.62mm)





#### EXTERNAL SIGHTS PERFORMANCE FEATURES

- Weapon Sight Features
  - Modular Performance for Tailored Performance and Cost
  - Shock Mounted, Close Coupled With Turret Body For Added Stiffness
  - Provides Day/Night Capability and Zoom Optics Capability
  - Video Image Display, Helmet Mounted or Monitor
  - Monocle or Manual Tracking System Target System
  - Supports Auto-Tracker and Computer-Controlled Fire Control
- System Capable of Accepting Existing Sight
  - Independent Panoramic Sight



### **MODULAR SIGHT**

